THE VETERINARY RECORD

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A Well Earned Recognition.

Professor Brown is seldom guilty of lavish praise. The following quotation, from evidence given by him before a committee of the Board of Agriculture may therefore be accepted as a very high compliment. He was referring to the history of the stamping out of pleuro-pneumonia and the examination of diseased lungs sent to London during the last four or five years.

"Mr. Duguid had under his immediate observation 3133 sets of lungs during that period, hardly one of which was free from disease. In my almost daily visits to the College, on my way to the office, I found Mr. Duguid surrounded with these morbid specimens, and it was a perfect harvest of cattle lung pathology. There were specimens of every disease, I should think, that ever occurred in the lungs of an ox, certainly in any part of Europe. Now, out of that 3133 sets of lungs, Mr. Duguid separated 1087, which he decided to be pleuro-pneumonia. And that his decision was right was frequently proved by the subsequent slaughtering out of the herds when other cases were found, sometimes considerably more advanced than the cases on which he based his decision. The important thing to notice is, that Mr. Duguid eliminated out at his own risk over 2000 cattle as not being affected. Now with our system of inspection, cases of infection could not have occurred from these cattle without our being able to trace back to those herds which he had set free the animal which had been the cause of another outbreak. But that never happened in one single case. This is the most remarkable instance of accurate diagnosis which I think could be quoted, and I should like to say a word in reference to the benefit the country has obtained. If Mr. Duguid, to avoid responsibility, had taken one additional thousand, about which he might have had a shadow of a doubt even, the result would have been the loss of something like £600,000 to the country, since something like sixty animals are killed in each outbreak, on the premises or upon other premises, and as we reckon a loss of £10 upon every animal is incurred."

Veterinary Pupilage.

The ultimate purpose of a veterinary surgeon is to practise his art—and an art is not to be learned from books, or through lectures. No one expects the recent graduate to be a master of his art. He is expected to be well up in the science, to possess sufficient intelligence to apply his knowledge when opportunity arises, and to have such acquaintance with the art that he may be trusted not to disgrace his profession or injure his patient. Even this small knowledge of the art requires some experience, and as no college or school contains the subjects for experience it is essential that every student should for a period be a pupil to some qualified practitioner. To enforce a pupilage with a practitioner is quite useless unless it can be shown that the practitioner *is qualified*. It is no good compelling a student to spend some months with a man who has no practice, and it is perhaps worse to force him upon some busy man who cannot teach and who will not help to cultivate either powers of observation or manipulative dexterity. The difficulty lies in selecting practitioners who are qualified, and until that question is grappled with and decided it is unfair to order a compulsory pupilage. A proper pupilage is as valuable as years at College, but parents and guardians have a right to say—"If you compel us to do this you must show us how it is to be done."

CASES AND ARTICLES

FRACTURE of SIXTH & SEVENTH CERVICAL VERTEBRÆ.

By W. J. Mulvey, F.R.C.V.S.

Judging from the number of cases of fracture of the vertebræ that have been reported recently, this lesion is of more frequent occurrence than is generally supposed. I venture to add yet another case, the particulars of which may prove interesting.

I was requested to examine a bay mare, lame off fore leg; no history could be obtained except that she had suddenly fallen lame on the previous day without assignable cause, on examination there was nothing indicative of any serious injury. The mare when standing in the stable pointed her foot, and on being made to move did so in a halting manner; the limb could be flexed without evidence of pain, and I therefore regarded the case as a simple one—probably due to some false movement while at work—which would pass off in a short time.

On seeing the mare again, after the lapse of a few days, I was informed that she had not laid down since my last visit, and on walking her out of the stable the lameness had noticeably increased. The off hind leg was not moved with freedom, and symptoms of hemiplegia were showing themselves, the head being inclined to the off side and both the fore and hind limbs of that side were moved with difficulty. Still there were no visible signs of injury, neither heat, swelling, nor pain on pressure; the fore leg could be drawn forward and backward without apparently inconveniencing the animal. The mare however had gone off her feed and was losing flesh, I therefore had her removed to my infirmary and placed in a large loose box, and for a time she seemed to improve, so much so that on being trotted out one day she went comparatively

sound. She was therefore sent home, and did a day's work, but on seeing her the following day I found that the lameness had very much increased, and she was decidedly worse than ever. She was therefore taken back to my stables, and carefully observed. In the box she would stand for hours in one position, head held to the off side, off fore leg extended and held over and in front of the near leg; and absolutely unable to get her head to the ground. Still there was no pain on pressure over the cervical vertebræ, but on thrusting the hand in front of, and a short way beneath the scapula, in the direction of the lower cervical vertebræ, there was evidence of pain, I therefore told the owner that I believed there was fracture of the 6th or 7th cervical vertebræ, and advised that the mare be destroyed.

Post-mortem. The off fore limb was taken off and the muscles beneath removed, when a large abscess was disclosed immediately over the 6th and 7th cervical vertebræ, and on clearing this away, both of these bones were found to be fractured in all directions. The fracture was evidently of some standing, as repair had taken place of several parts of the bone.

FRACTURE OF THE LAST TWO CERVICAL AND FIRST DORSAL VERTEBRÆ.

By F. Hobday, M.R.C.V.S., Royal Veterinary College, London.

The following case is one which came for treatment to the Free Clinique of the College last month and which is, I think, of especial interest, because it is somewhat similar to the one reported in last week's paper and shows what great injury may be done to a vital part without an absolutely fatal effect.

The patient, a chestnut mare, 10 or 12 years old, driven in a hansom, was found in her stall one morning with her head bent back and her leg round the headstall chain. After some difficulty she was extracted from her position, and did not appear much injured until brought out of the stable, when she walked along with her head always inclined to the right side. The owner applied hot fomentations and kept her at rest for three weeks, when he brought her up to the College. Appetite was fairly good all the time.

Examination revealed a very hard, fleshy enlargement on the left side, in the lower third of the neck, this did not give way at all on pressure, and was evidently muscular. Upon attempting to turn her round she moved with the fore part of her body quite rigid, not, however, exhibiting any sign of pain. During progression, she carried her head inclined to the right side.

The case was diagnosed as being either a fracture of the 4th or 5th cervical bone without displacement, or else a partial dislocation in this region. The mare was cast on the left side, a pillow placed under the centre of the neck and pressure applied to force it back into the normal position. This was accomplished whilst the animal was down, and a favourable termination hoped for, but on rising the neck again reverted to the right side. The next day another attempt was made, with the same result, and the owner was advised to have her destroyed.

Post-mortem examination revealed the muscles on the left side of the neck to be lacerated over the 4th, 5th, 6th, cervical bones. Of the bones themselves, on the right side of the 6th cervical there were signs of a callus forming on the tricuspid process and upper part of the posterior articular facet, also on the right side of the lower part of the body. The 7th cervical had extensive exostoses on the right side and upper part of its body, the right anterior articular facet was fractured transversely and completely. The inferior articular facet of the body was in five or six pieces and shewed no signs of repair. The first dorsal had the anterior facet on the left side fractured and shewing no signs of repair, whilst on the right side of the superior spinous process, on the top of the arch, was the commencement of an osseous growth.

Considering the amount of injury done, it is astonishing that there was not more constitutional disturbance; had the mare been allowed to live, there is no reason to suppose that she would not have done a certain amount of slow, steady, work; but, of course, she would have always been deformed. The part which was the most serious was the inferior articular facet of the body of the 7th cervical, on account of its proximity to the spinal cord itself, although the strong and tight manner in which these bones are bound together would act largely as a protective agent.

RUPTURED LIVER.

By W. J. Foreman, Leadgate.

The following interesting case has just come under our notice, which you may deem worthy of insertion in your valuable paper.

Subject. An aged chestnut gelding, the property of a local tradesman, which on Wednesday had been ridden by the son of the owner; previous to this the animal had not done much work for some time, occasionally working in a butcher's cart.

History. The animal had been running in the field, and for a fortnight before the owner thought he was dull and not feeding well; when put to work went as usual, the animal being a fast mover with good action. On examination, the animal had a very unthrifty appearance, was dull, off feed, coat slightly staring, pulse regular, but rather small, temp. 102 F. nasal membranes pale and dry, conjunctiva slightly yellow.

Prescribed a dose of physic ʒix ball. On Saturday the owner sent word that the horse was down and could not rise, on examining the animal we found body and extremities cold; very weak pulse, tried to take the temperature three times but the mercury would not rise at all. In less than 10 minutes he died.

Post-mortem. On opening the abdomen a quantity of blood gushed out; further examination revealed rupture of the liver, which was in a very advanced stage of degeneration; the right kidney was also in state of degeneration. Other organs paler than normal, otherwise healthy.

INTESTINAL INTUSSUSCEPTION.

By JAMES BROWN, M.R.C.V.S., Fordyce, N.B.

On the 28th of April I was called in to see a foal that was said to be "unwell." The history of the case was as follows:—

About 11 a.m. the foal, which was ten days old, was noticed by the attendant to be dull and awkward in its movements of the hind limbs. This loss of power of the hind quarters gradually increased, and it was with great difficulty he was able to maintain the upright position. There was also considerable perspiration over the back and loins for some time, but this wore off. The foal up to this time sucked at intervals.

On my arrival in the afternoon I found my patient in the recumbent posture, mucous membrane slightly injected, pulse 58, respiration slightly hurried, temp. 102 F. The hind limbs were straight and the hocks rigid. Muscles over the quarters felt normal, no perspiration nor tympany present. He lay perfectly quiet, made no attempt to rise and did not seem to suffer much pain. On assisting him to rise it was seen that the hind quarters were totally paralysed, and he had to be held in position while he made some feeble attempts to suck. On inquiry he had been seen to urinate, but no fæces had been passed that day.

Treatment. I had difficulty in coming to a satisfactory diagnosis of the case, the more so when I was informed was the foal was docked exactly eight days previously. However I considered he was suffering from some irritation of the bowels, probably impaction. Before my arrival the owner had administered six wineglassfuls of castor oil, which I certainly thought was sufficient. Gave a stimulant and anodyne draught, this to be followed up with small doses of bellad. ext. in glycerine every four hours: also left an anodyne draught to be given if pain should set in. Ordered injections of tepid water and linseed oil and hot fomentations applied to the abdomen; also to alter the position of the foal frequently.

I called next morning about 9.30 when I was informed my patient had died one hour previously. On inquiry I was told that some hours before death he was in great pain as if suffering from colic.

Post-mortem. On opening into the abdominal cavity there was, to all appearances, no departure from the normal. The rectum and large bowels were comparatively empty, and the mucous membrane healthy. On examining the small intestines the cause of death was soon discovered. About the centre of the jejunum an intussusception had taken place, the invaginated portion of the bowel measuring about six inches. On traction being applied to the obstruction it came away under some force, the invaginated part was dark in colour, and on section three or four times its normal thickness. At intervals, between this part and the stomach, there were found other four intussusceptions, although much smaller, some of them measured from 1½ inches to three inches in length. The stomach was full and the mucous membrane healthy. In this case the duration of the disease, from the time of attack till death, was short, being about 21 hours, and in the early stage at least there was no marked rise of temperature.

From this case the following questions may be asked. Apart from perverted peristaltic action of the bowels what was the actual cause of this lesion? Is paralysis of the hind quarters a symptom of intussusception of the small bowels in foals? Supposing a case like this to be diagnosed would tobacco smoke enemata be of any practical benefit?

ANNUAL LICENSING OF VETERINARY SURGEONS.

Some thirteen years have now elapsed since the passing of the Veterinary Surgeons Act, and as time goes on it seems that the said Act does not quite give the profession the powers it should. As the profession demands more time, study and money of its intending candidates it is hardly fair to the freshly qualified man that he should have to compete with men having no qualification whatever, and as no Government would ever allow a Bill to be passed, preventing anyone giving advice respecting the treatment of animals, the only way out of this difficulty would be for the veterinary to combine with the medical and dental professions for the purpose of attempting to get passed an Act compelling anyone practising the respective professions to take out an annual license. If the fee of such license be only one guinea it would benefit the Revenue, and at the same time prevent any non-registered person from practising. No one would be inconvenienced by paying a sum which would be less than sixpence a week; then the Inland Revenue officers would lessen the labours of the Royal College of Veterinary Surgeons by looking after the interests of the Crown and at the same time preventing quackery. Lawyers have a somewhat similar Act, surely we ought not to be begrudged a similar privilege. Of course it would not pay the Revenue to collect only the fees of our own annual license, but combining it with the medical and dental professions it certainly ought to be worth their consideration.

PROGRESSIONIST.

VETERINARY SOCIETIES.

MIDLAND COUNTIES VETERINARY MEDICAL ASSOCIATION.

A quarterly meeting of the Association was held at the Grand Hotel, Birmingham, on Tuesday afternoon, August 14th, the chair being occupied by the President, Mr. H. Olver, of Tamworth. There were also present: Professor Williams, Messrs. Malcolm, Stanley, Gibson, Parker, Blakeway, Birmingham; E. G. Crowhurst, Leamington; Simpkin, Market Harborough; Cole, Hinckley; Over, Rugby; Collett, West Bromwich; Gold, Redditch; Barling, Ross; Perrins, Worcester; Hubaud, Cheltenham; Gooch, Stamford; Grasby, Daventry; Beddard, Cartwright, Wolverhampton; Barrett, Nuneaton; Wartnaby, Burton-on-Trent;

Burchnall, Loughboro'; Coe, Stoke-upon-Trent; Wragg, London; Taylor, Stourbridge; W. H. Brookes, Handsworth; and H. J. Dawes, Hon. Sec., West Bromwich. *Visitors.*—Messrs. Lindley, Rutherford, Green, Franklin, Hopkin, Mason.

The HON. SEC., read letters of apology from the following, Professors Walley, McCall, Macqueen, Penberthy, McFadyean; Dr. Fleming, Sir H. L. Simpson, Messrs. Pritchard, Trigger, Smith, Green, Bainbridge, Russell, Merrick, Blunt, Tailby, and others.

NEW MEMBERS.

Mr. Blakeway, (Hon. Treasurer), nominated as a member of the Association, Mr. A. Mason, of Leeds, Mr. Over, Rugby, seconded, and the name will be brought forward at the next meeting for election.

On the motion of Mr. H. J. Dawes (hon. sec.) seconded by Mr. John Blakeway (hon. treas.), Mr. W. H. Brookes, of Handsworth, who was duly nominated at the last meeting, was unanimously elected a member of the Association.

The name of Mr. Bidlake, of Stafford, who was also nominated at the previous meeting, was obliged to stand over until the next meeting, in consequence of the absence of his proposer.

INSURANCE COMPANIES AND THEIR FEES.

The HON. SEC., (Mr. H. J. Dawes) read the circular letter from the secretary of the Eastern Counties V.M.A. (This has already appeared in our pages).

Professor WILLIAMS quite agreed with the members of Eastern Counties V.M.A., that a fee of 2/6 per horse for a report to an Insurance Company was too low, although of course if a man went to examine a stable full at once it might not be so bad. In Scotland, where warranties were required he had even known people make the same examination do for the warranty as for the insurance company, and the veterinary surgeon was thus deprived of his fee for the examination.

Mr. WARTNABY (Burton-on-Trent) also agreed that the fees were too low, but in his opinion if the matter had to be handled at all, the whole profession ought to set their faces against it. It was no use for a society to do anything on its own account, unless they had the support of the profession generally, and he failed to see, if the matter were properly discussed, how any member of the profession could object to the charges being revised and improved. He once declined to examine and report on a horse for 2/6 because it was some distance away, but another practitioner examined, and as a consequence he (the speaker) lost his client.

Mr. MASON, (Leeds), also thought the fee was most inadequate.

Mr. COLE, (Hinckley), thought there were insurance companies and insurance companies. He personally had found little to complain of, for it more than once been the means of introducing clients to him.

Mr. SIMPKIN, (Market Harborough), pointed out, in reference to the matter, that there were sometimes examinations for which they could charge the client and obtain the proper fee.

Mr. E. G. CROWHURST, (Leamington), thought it was ridiculous to expect a professional man to examine horses at 2/6 a time, especially when they often had to drive two or three miles in their own trap to earn it.

Mr. GOOCH, (Stamford), said the question had been discussed by many societies two or three of which he had been present at, and he had come to the conclusion that nothing could be done unless the whole profession took it up. He proposed that the letter lie on the table.

The CHAIRMAN said he never made a point of going out of his way to examine animals for insurance companies because the fee was so small, but if the animals were brought into his yard he did not mind expressing his opinion.

After some further discussion, Mr. Crowhurst moved and Mr. John Blakeway seconded that the resolution passed by the Eastern Counties Association be adopted by this society also, and this was carried *nem. dis.*

ACCOUNTS.

On the motion of the hon. treas. (Mr. John Blakeway) seconded by Mr. Malcolm a cheque was ordered to be drawn in favour of the hon. sec., for the payment of current accounts.

SOME DISEASES OF THE SKIN.

AN ADDRESS by PROFESSOR WILLIAMS.

Prof. WILLIAMS said he was overwhelmed with the responsibility of so doing, because be stood before a body of veterinary surgeons who probably knew quite as much, if not more about the subject than he did himself. He had prepared a few notes upon the diseases of the skin, but he confessed to being a bad reader, and was therefore induced to give them a sort of lecture rather than to read them a paper, to which they were previously accustomed. To take up the study of a book on Dermatology, no matter by whom written, was apt to confuse the best in the world. It seemed to be a study in itself. There were full courses of lectures in London devoted to skin diseases of the human being, whilst in veterinary practice they would also require a session of study.

To his thinking the arrangement and classification of diseases by writers on dermatology were most confusing, and it was a matter of the greatest difficulty, particularly for young men, to make head or tail of them, because the classification was simply descriptive of the symptoms of the disease, without giving any idea as to its pathology. He himself had therefore tried to arrange some common-sense classification of skin diseases, and he had grouped them into two great orders. 1st.—Non-Parasitic disease, that was to say, diseases due to non parasitic causes, and 2nd.—Diseases which were due to parasitic causes. Then he sub-divided the non-parasitic diseases, into (*a*) Inflammatory; (*b*) Non-inflammatory; and (*c*) New formations, although the last named might be done away with, because it could be placed either under the inflammatory or non-inflammatory head. Parasitic diseases he sub-divided into two kinds, namely those due to animal parasites and those due to vegetable parasites.

Then again, he endeavoured to arrange inflammatory diseases as representative of the inflammation, and whether arising from internal or external causes, they might be compared to conditions artificially induced by irritants. For example, if one applied a moderate quantity of mustard, it induced redness of the skin. "Erythema" or inflammation of the external layer of the dermis, seen in the colourless parts of the skin, such as white heels, &c. He would first describe mere redness. It might be due to wet, cold &c., about which his hearers knew as much as he did. Even that condition was induced by internal causes, and the most familiar example of it was what the old farriers, to whom he desired to pay a high tribute of praise, called "Surfeit," which term was a very descriptive one, and gave them a much better idea of the nature of the disease than the term which was at present applied to it. It was also called nettle-rash, but its scientific term was Urticaria. It most frequently arose from a sudden change of diet, which caused some irritation or mal-condition of the digestive organs, and was, although very rarely, a concomitant of colic. It consisted of an eruption of elastic eminences, rounded or oblong in shape, and attended sometimes with severe

prurigo, although sometimes the prurigo was very slight or even absent. The attack is often very sudden, the horse seeming perfectly well and then in an hour or more he is found covered over with blotches. He had seen cases where there was no irritation, but lumps appeared all over the body. They were hot to the touch and if the skin were white, the redness on the surface could be distinctly seen. The owner would send in a great hurry for the veterinary surgeon, but unless the latter went at once he would often find the animal better, for surfeit often disappeared as quickly as it came. In some cases it was a chronic disease, but very rarely. He had seen cases that were most difficult to treat, crop after crop of these elevations appearing one after another. He had given tonics, purgatives etc., and ordered a change of diet, but though the crop might disappear, another crop soon came. Professor Mc Lagan, (a brother of the Archbishop of York, if that fact would increase the value of his opinion) was a gentleman who had studied this chronic nettle-rash, and he said it was due to the non-excretion of nitrogenous products and the retention of urea. He (Professor Mc Lagan) recommended that such cases be treated with colchicum, with the view of causing the excretion of the retained urea. Professor Williams stated this was a successful treatment in his own experience.

Erythema might be acute or chronic, and the most common form of it met with in veterinary practice was seen in mild cases of what was commonly called mud-fever. As they were aware that affected the limbs mostly, and it was then easily combated, but in some instances the trunk became involved, and it was then associated in some cases with low fever, loss of appetite and a general unthrifty condition of the whole body; often irregularity of the bowels and the kidneys, the animal becoming hide-bound and remaining unfit for work for several weeks. Often when horses came in wet and dirty, mud-fever followed washing, whereas when the dirt was allowed to dry and be brushed off next morning, nothing serious ensued. Most of those cases would give way to treatment, a little purgative medicine and the application of zinc ointment to the affected part being generally efficacious. He had seen chronic cases of mud-fever where the condition of the legs was extended all over the body, and such cases were very difficult to treat. Whether it was due to a mere extension of the irritation of the limbs (as inflammation will extend) or whether it was due to the condition of the excretory organs, he was not able to determine. It required a lot of treatment, some linseed and lime water mixed in a hot mash at night was as good a cure as anything he knew. As to sulphur and all those things, he had no faith in them.

Erythema of a diffuse kind also might succeed very close clipping, with redness and superæsthesia of the skin, terminating in desquamation of cuticle and hair. In those cases, he always found that the ordinary white lotion with opium was the best application, and a little cooling medicine and low diet. It allayed irritation.

Some authorities described a form of erythema affecting only the white parts of the body, but in this country it was very rarely if ever to be met with. Roll, of Vienna, says: "There occurs amongst horses with white faces, and only at pasture, an eruption which consists of small pustules over which yellow crusts form and which adhere to the rough and thickened skin. An ointment is required to favour the separation of the scabs, and no further treatment is called for."

Gamgee mentioned this disease as affecting the white parts of the body only, but this peculiarity could scarcely be said to apply in this country, and it might be considered to be the same disease as the Herpes Labialis—called by Professor Dick, Crown Scab." He (Professor Williams) had seen horses of all colours affected when they fed on certain clovers. Those parts of the horse's body that were continually in the clover, namely the face and legs, were bad, as though the clover acted as an irritant.

He now came to another form of eczema, which so far as his experience went was incurable, and this was the first time he had endeavoured to describe it to a society. It was a most peculiar disease and he had only met with seven or eight cases in the whole course of his life-time. He confessed that everyone of them had terminated fatally. One was said to have been cured, near Bradford in Yorkshire, but the animal died a few months after the reported cure. He thought that the study of this disease was the key to a great many diseases of the skin, not only in horses but in human beings. For a long time he was unable to give it a name, and termed it at first "Vicarious Eczema;" but after further consideration and fuller investigation, he had finally decided to call it "Urinous Eczema. In short, the horse urinated through its skin, and he so named the disease, because after studying its pathology he discovered the peculiar fact—at least, in his belief—that the skin was performing the functions of the kidneys. He thought the term "Vicarious Eczema," which he at first chose, was too vague, as it gave no indication as to which function was being vicariously performed, so he called it "Urinous Eczema."

Professor WILLIAMS then proceeded to mention a case that had come under his personal knowledge. The horse was treated by a highly respectable member of the profession who was still living at Dalkeith, and it was such an extraordinary case that but for a whitebearded man like himself unblushingly repeating it, some of those present might declare that he (Prof. Williams) was romancing. The horse in question never passed a single drop of urine in the natural way for three months, but urinated through its skin. There was a continuous stream running from its mane, night and day. The body was saturated and the loose box, when he went to examine the animal, smelt very strongly of ammonia, as also did the horse itself. He could hardly believe the story himself at the time. He examined the bladder and found it perfectly empty, and the curious part of it was that the horse lived for several weeeks afterwards.

Another case came to him from Newcombe's circus; and in three others, he had held a post-mortem examination. (Professor Williams produced a photograph of one of the cases which was examined with much interest.) First of all, the Professor continued, this case followed influenza. He knew the mare whose photograph they had just inspected. There was first soreness of the throat and swelling of the legs. By-and-bye there issued a fluid from the surface of the body, and particularly from the extremities, and the continual discharge irritated the skin. There was then a formation of thick scales, some half an inch in thickness. The following were the symptoms:—Swelling of the extremities, with fœtid exudation; skin excoriated, eruption all over the body, from which issued a fluid becoming converted into crusts; skin swollen and tender; movement stiff and painful; bowels constipated.

The post-mortem conditions were as follows:—*Skin*, epidermis desquamated; derma hypertrophied; sebaceous follicles enlarged, and also some of sudoriforous glands. *Cutaneous excretion*, large amount of nitrogen in form of ammonia; urea small; albumenoids, 5 per cent. fat, salines, water, large proportion volatile butyric acid. *Kidneys*, chronic charges; universal degeneration; slight increase of connective tissue. *Liver*, changes, particularly at periphery of lobules; entrance of morbid material by blood vessels.

In this condition they had an example of one organ performing the functions of another. He thought it might be compared to Bright's disease among human beings, when both the skin and the bowels performed the functions of the kidneys. If they could suggest any

treatment he would like to hear it, because he himself had tried various methods. He had washed until the skin was thoroughly clean, given purgatives, tonics and the like but the cases had all terminated fatally. The only rational treatment (he did not say it would be successful) was this: diminish the functions of the kidneys as much as possible and at the same time assist nature by calling upon the other organs, such as the skin and the bowels to do more than their ordinary share. In that case there might be a possibility (and it was upon possibilities that they often had to work) if they could diminish the action of the kidneys during the earlier stages of the disease, of enabling the kidneys to regain their natural condition. He might say that in only one case there was no secretion from the kidneys. The urine in all the others was like linseed oil, and contained little urea, but was mostly made up of mucus and the products of catarrhal inflammation. In dismissing that subject, he would like to say (and he stood before his peers and was open to criticism) that if any one present could cure such a case as he described, he would be doing more than he (Prof. Williams) had been able to do.

There was one other form of erythema, which he would briefly mention, called *erythema mammillarium*, which affected the mammary gland after parturition, and was most apparent in the cow. When it was not associated with swelling of the gland and pain, it must be looked upon as the natural condition of the part under the circumstances.

Of the suppurative or third form of dermatitis, they had an example in grease, cracked heels, etc., and they had also examples of inflammation and hypertrophy of the skin in psoriasis, as seen about the hocks, knees, etc. *Psoriasis carpi et tarsi*, commonly known as mallenders, sallenders and rat-tails, a condition arising from a chronic and non-contagious inflammation of the derma, characterized by the development of patches of an irregular form, or of indurated elevations the summits of which might suppurate. The chronically congested condition led to an irregular hypertrophy—scientifically known as *acne hypertrophica*—and it was very difficult to cure.

Grease was often a very troublesome disease, but in one of its forms, it would often give way to zinc ointment. He thought canker and grease were very much akin. The question was often asked whether it was hereditary, and whether animals suffering from it should be bred from. For his part, he should say a tendency to the development of the disease was undoubtedly hereditary, and on that account, mares which suffered from, or were subject to grease, ought not to be led to the stallion. He found that to get a flat shovel and put it against the skin and burn the grapes off was the best treatment, although it might seem a somewhat barbarous one. The legs were immediately afterwards dressed with carbolic acid, and in the course of two or three hours the limb was put in poultices and there was no great succeeding inflammation.

It was not his intention to go into the question of parasitic diseases, but he thought that in this country, at least, vegetable parasitic diseases might be reduced to one, namely, *Tinea Tonsurans*, or scurfy ringworm. It was communicable from man to animals and *vice versa*. It was called Tonsurans, because the spots became bare as if the parts had been shaved. The disease was due to the presence of a cryptoganic parasite called the Tricophyton Tonsurans, discovered by Malmstein in 1845. It consisted of oval transparent spores, or globules about 1/1000th part of an inch in diameter, either isolated, or forming articulated filaments growing at first in the interior of the hair follicles. The hairs and fungi simultaneously increased; then the hairs began to lose their gloss and elasticity; became brittle, and broke off immediately above the surface of the epidermis, which now became thickly covered with blueish-grey bran-like scales. The spots were mostly seen about the upper parts of the body and occasionally on the face.

The very best treatment (he had only seen one case that would not give way to it) was that by iodine. The only fault about it, if fault it could be called, was that it cured too quickly.

Now, as to the effects of these so-called tonics, such as arsenic, nux vomica, etc., he was not satisfied with them. Practitioners did this and that, and flew to those tonics, but the question which came to his mind was, Did they do any good? and he must confesss that in the majority of cases they did not. They very often merely followed the fashion. He thought the cause of the disease ought to be further studied. He would take for example the formation of scales in the human being, and they found the same condition in horses. A "scaley" horse, no matter how carefully he was groomed, was covered with dirt in a short time, and they might give him all the arsenic in the world, but it would do him no good. It simply arose from indigestion which gave rise to the production of oxalic acid in the blood. There was a stage in the procees of digestion which explained that in a very few words. As they knew, there was a great deal of starch in food, and that had to be converted into a soluble material. In other words, starch had to be converted into sugar, and the old writers upon human medicine said that vegetable sugar must be converted into animal sugar. There was an intermediate stage between the two, which was the development of oxalic acid, and if the conversion stopped at the oxalic stage, there was an accumulation of oxalic acid, which combined with the lime, and it was that which caused the disease in question. What was the good, therefore, of applying tonics?

Take the case of a hunter which got dyspepsia, and the food not being in a proper state to undergo that metamorphosis, acted in the way described, as an irritant to the skin and produced this scurfiness or bran-like scales. There was, however, a form of dyspepsia when a tonic, and particularly a combination of arsenic and nux vomica might be expected to have a beneficial effect.

There was one other disease which he should like to allude to by way of conclusion, and which was said to be parasitic disease, familiarly known as Canadian skin disease, although whether it was so-called because it was brought to this country from Canada, he really could not say. It consisted of the formation of little pustules underneath the saddle, and was undoubtedly contagious. He had himself examined the pus and failed to discover anything parasitic about it, and the disease would generally pass away in about a fortnight.

Discussion.

The Chairman, after expressing their indebtedness to Professor Williams for his admirable address, invited discussion.

Mr. J. Malcolm said that for the last 13 years, to his own knowledge, the subject upon which the Professor had discoursed had never been before them, and as it was a most important one they ought to be doubly thankful to him for his address. They did not go long in practice without having some skin disease to treat, and to be successful in a bad case might mean a great deal for the young beginner. He thought Professor Williams' classification of non-parasitic skin diseases into inflammatory and non-inflammatory would appeal to all of them. He acknowledged the accuracy of the Professor's definition of erythema, but he hardly agreed with him when he cited urticaria and mud-fever as typical forms of erythema, because in the former they had to deal with a distinct effusive condition of the skin and not a simple erythema, and in mud fever they had essentially a dermatitis. He was greatly interested in the cases which the

Professor termed urinous eczema, for they were really most remarkable. He (Mr. Malcolm) once saw a case of skin disease in which there was an enormous "scale" formation with cracks over the surface of the skin, and not a hair to be seen on it. He never saw anything else like it, and if he remembered rightly the treatment of it was unsuccessful. Whether the form of treatment which the Professor recommended was right or wrong, it certainly was a very interesting one, and if the kidneys were in fault deserved a trial. They ought to try to relieve the kidneys by calling upon the skin and the bowels to assist the kidneys. There was one disease upon which Professor Williams had not touched, and he supposed it was because time would not allow, and that was Lichen. There was some discrepancy in the published cases. Prof. Williams in his books confines lichen to the legs of the horse, but Professor Walley described cases all over the body. With reference to Canadian acne, he had had a few cases of it himself, but could not trace it to any Canadian horses, probably because they had been so long in this country. He could never cure his cases until he had thoroughly destroyed the lining of the saddle, and he entertained no doubt as to the contagious character of the disease.

Mr. GOOCH said he quite approved of the remedy which Professor Williams recommended for grease. In very obstinate cases he himself had tried arsenic with success. In cases of ringworm Professor Williams relied a great deal upon the iodine treatment. In calves, he (the speaker) had tried the yellow iodine treatment. If the application was left to the herdsman he very often only touched the centre and left the edges alone, the result being that the ringworm would continue to spread. He himself thought special attention should be paid to the edges. He found it was a common practice among herdsmen in his district to apply a little common mustard, in its thick state, and it had been attended with a great deal of success.

Mr. WRAGG was afraid he would not be able to add much to the debate, because the subject was one the pathology of which they were pretty well agreed upon. There was one thing of which he was pretty certain, and that was that to treat canker and grapes in the town and in the country were two different things. Where they could get an animal to work on the fresh ploughed land, the exercise and the effects of the soil did as much towards effecting a cure as any remedies they could apply. As regarded ringworm he had used a solution of sulphate of iron and found it very effective.

Mr. WARTNABY said he agreed with pretty well all that had been said, but he should like to learn a little more than he knew at present about one or two things. In long standing cases of grease, he had often been unsuccessful in the after treatment. He should also like to know how far the animals were affected by the drainage of the stable. Why he asked the question was because he had been struck with the fact that when an outbreak of grease occurred as many as four and five out of a stable of eight or ten had been affected, which was a larger proportion than one expected to meet with generally. As regarded ringworm and the professor's treatment of it, the great objection, to his mind was the possibility of subsequent baldness, which in the case of a hunter or any other valuable horse was very much to be deprecated. He used a very simple treatment—a little fish oil. No mark is left and the animal does not present that baldness which follows the use of mercurial ointment. He thought the disease was more serious in the case of cattle, and he had seen cases in little calves that could not be cured. He should like to know whether any of his brother practitioners had come across that particular ringworm which seemed to defy all treatment. In dogs, he had seen cases of eczema which had broken out about the eyes and extended down to the lips and nose. There was no smell with it, but the hair came off. He should like to hear something about it.

Mr. HOPKIN said that of all the various branches in veterinary science, dermatology would never be his choice, but like all other practitioners he was constantly called upon to deal with it, and on that account he was bound to be interested in it. He regarded canker and grease as allied diseases. So far as ringworm was concerned he thought if they had a specific treatment it should be iodide of mercury, but he was afraid the result might be a blemish. He had had white spots after the use of it, but at the same time he would rather have that blemish in one or two animals than have the whole stud affected. He had noticed the prevalence of ringworm among calves when barley-straw was used as bedding, and he should like to know whether the barley straw had anything to do with the appearance of ringworm. Professor Williams had referred to Canadian pustules; he (the speaker) had heard them termed German pustules, and as to their being of a contagious character he had no doubt whatever.

Mr. JOHN BLAKEWAY thought Professor Williams had given the peculiar disease which he described a proper name when he called it urinous eczema. With regard to grapes, when he (the speaker) was at College Professor Robertson used to recommend the shovel treatment, but he could not say that it had always been successful at his hands. He had been in the habit of using a paste composed of sulphur and sulphuric acid, which he smeared on with a knife. He had always found in his treatment of grease that the drier he could keep it the better. He had recently had two cases of canker and he was satisfied that they were both going to grease. They must keep canker dry, and if they repeatedly dressed it, provided it did not extend to grease, it could either be cured or relieved. He found that tar did more harm than good. Referring to ringworm, a remarkably good specific in his opinion was diluted nitric acid rubbed on with the finger. It did not create baldness, although it discoloured the skin.

Mr. GOLD said he was interested in the eruption which Professor Williams had mentioned which manifested itself round the mouth and nostrils of the animal. He (the speaker) once saw a pustular eruption round the noses of some well-bred Shropshire lambs that had fed not on clover but on vetches. One particular flock gave considerable trouble, but as a rule the disease required little treatment and cured itself in a very short time. He thought almost anything would cure ringworm, but in the case of calves especially, they must be careful not to use anything too expensive, or else if they did, and only charged their client 1/- or 1/6 for dressing, they would soon find themselves out of pocket.

Mr. R. H. CARTWRIGHT, (Wolverhampton), was also very much interested in the case of urinous eczema. He showed precisely the same symptoms, except that the animal did not urinate through the skin. They tried all sorts of dressings but in vain Unfortunately, at the time they did not think about the kidneys.

The CHAIRMAN said he must first of all thank Prof. Williams for coming all the way from Edinburgh to address them in Birmingham. The Professor made one stipulation, and that was that he (the chairman) should name the subject, and he thought they would agree with him that his choice had been a very happy one. Skin disease was one of his great troubles. He had often failed to treat them satisfactorily, and he should still have difficulty in giving names to all skin affections. He agreed with nearly all Professor Williams had said, and was particularly interested in what he called a "scaley" eruption of the face due to grazing in clover when too ripe. He had several cases last season, and also some at the present time, and he found that the hair did not take on its former colour. Urinous eczema was new to

him, as he thought it was to most of them present, but it certainly called to his mind a case he had many years ago which terminated fatally, and which was very much of the nature Professor Williams had described. He thought they were all pretty well agreed on the question of grease, whilst as for ringworm they all appeared to have their own specifics. For his part, he used the ordinary mercurial ointment made up, not with lard as one member had suggested, but with soft soap. He found it invariably cured and was perfectly clean, besides which there were no ill effects. He had had extraordinary quantities of ringworm lately, many horses every week having been dressed in his yard for it. As some of them might know, he had an old spaniel dog which was his boon companion, which was always about the yard. He (the chairman) went away for a short time and when he returned, he found his old pet nearly denuded of hair. It had undoubtedly caught ringworm from horses that had come to be dressed, and it was only cured after considerable trouble. He agreed that Canadian skin disease was contagious, and was inclined to regard it as parasitic. He had in his practice just now a case of acute dermatitis. For the past three years, the animal had been affected in the spring, and became excessively sore, every particle of hair coming off, but he soon got better and was able to resume work. He wondered whether there was such a thing as periodic dermatitis.

Professor WILLIAMS by way of reply, explained that he had only mentioned a few typical cases of skin disease, for the study was too vast a one to permit him going more fully into it. Reverting to ringworm, he only wished he could give them a recipe for producing hair for bald spots. When the hair was once destroyed, nothing in the world could reproduce it. With regard to the application of iodine in ringworm, there was no need to make it up into an ointment, as it could be painted on. Ringworm in horned cattle often disappeared with the summer. Of course it was essential that ringworm should be dressed at the circumference, so as to prevent it spreading. As to canker, he always advised his students to pray that for the first four or five years they were in practice they might never have a case of canker. They thought they had cured their case and found a panacea for all such ills, but in two or three days they were no better than they were before. Cases of canker did get better, but very few. He had known a case being cured by common salt, but he had seen a great many more cases that had failed altogether. There was a form of parasitic disease in the dog which might be temporarily cured but which would break out again. As to the face eruption on sheep he had seen cases on the Scottish hills and thought there must be something in the food which acted as a irritant. He had sometimes found it concurrent with period of casting the coat, and he believed it to be simply an exaggerated form of moulting. In those particular cases, the skin became in a condition bordering upon inflammation, and there was a rapid casting off of the old hair and a slow recovery of the new hair.

Mr. J. MALCOLM: Mr. Chairman, may I crave your indulgence for a minute. Various speakers have referred to canker and characterised it as incurable. I did not speak upon it because I did not consider it came under the head of skin diseases, but after what has been said I specially invite the members present to see two cases I have in hand. The first case was sent me in March last by Mr. Axe, of Doncaster. The case was a five-year-old horse, I paid him £10 for it. Although three feet were affected and in one the disease extended to the coronet, that horse is now absolutely free from canker, and has been regularly at work in the Corporation stud for two months. The second case was sent me a month ago by Mr. Walker, of Oxford. It is now under treatment and will soon be cured. I believe that every case if properly treated at an early stage can be cured, the results depending simply upon the competency and the application of the practitioner.

The meeting then assumed a conversational character and an exchange of opinions took place upon cases at present under the treatment of members, whilst Prof. Williams created additional interest by exhibiting some teeth and making a few remarks upon them.

THE NEXT PLACE OF MEETING.

Mr. GOOCH proposed and Mr. Over seconded that the next quarterly meeting be held at Rugby, which was carried unanimously.

CONCLUSION.

A vote of thanks was cordially passed to Professor Williams for his interesting address, on the motion of Mr. E. G. Crowhurst, seconded by Mr. Malcolm. A similar compliment, proposed by Mr. Wartnaby and seconded by Mr. Gold, was also accorded to the Chairman for presiding, after which the members adjourned to another room where tea was partaken of, and a pleasant evening was spent.

H. J. DAWES, *Hon. Sec.*

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

The trustees of the late Mr. Richard Berridge have, with the consent of the Attorney General, now handed over to the Institute the residue of the legacy amounting to over £20,000 for the purpose of building and endowing a laboratory for the chemical and bacteriological examination of water supply, and the investigation of processes of sewage purification. The permanent laboratory is now in course of erection on the site secured by the Institute at Chelsea, but pending its completion a temporary laboratory has been fitted up in order that the work may be at once proceeded with. Mr. Joseph Lunt B.Sc. F.C.S., formerly assistant to Sir Henry Roscoe, has been appointed by the Institute to carry on this work under the Director's supervision. The Institute is now prepared to undertake the bacteriological and chemical examination of any samples of water which may be submitted.

In addition to this the Institute is also prepared to undertake the bacteriological or pathological diagnosis of any pathological material. The demand of this kind of work has greatly increased, so much so that although Dr. Ruffer will still retain charge of this department, a specially trained bacteriologist has been appointed to work under his direction.

Particulars may be obtained by writing to the Director at the temporary offices, 101 Great Russell Street, London, W.C.

The British Institute of Preventive Medicine, which has been but a short time in existence, had an exhibition of bacteria at the Bristol meeting of the British Medical Association, which was the most complete and comprehensive which has ever been brought together in this country. The cultivations, which number over 1,000, and the fifty odd specimens under as many microscopes, were all made by Mr. H. G. Plimmer, F.L.S., the pathologist to the Cancer Hospital, and Dr. F. Blaxall, the lecturer on bacteriology at the Westminster, both of

whom are doing research work at the Institute. The exhibition was a complete representation of our present morphological knowledge of bacteriology, and was visited during the meeting by a very large number of the members who were present, to many of whom the opportunity of seeing the living cultures, and the microscopic appearances of the variovs micro-organisms, must have been of great value. Not only were there cultures of all the known micro-organisms, but they were each shown growing. Dr. Macfadyean showed the various methods of cultivating anaërobic organisms, the bacillus of quarter evil was exclusively used, so that the various methods could be the better compared. This exhibition certainly indicated that the British Institute of Preventive Medicine bids fair to become, as its prototype the Institut Pasteur is in France, the centre of bacteriological research in England, and the Institute has shown great energy in being able so quickly to get together such an exhibition.—*Brit. Med. Journal.*

EXTRACTS AND NOTES.

THE ART OF THE SURGEON.

An abstract of the "Address in Surgery" by J. Greig Smith, M.B., at the Annual Meeting of the British Medical Association.

In seeking for a subject on which to address you I have been careful to consult precedent. The surgical orator has, I find, most often and most properly assigned to himself a task akin to that of the minstrel at the feast in old times. He has been our pæan-writer; he has sung of our victories over science, and he has glorified our scientific heroes.

I have thought that I may for once leave the science of surgery alone—it is, indeed, well able to take care of itself—and, instead of the science, I shall speak of the art; instead of the making of surgery I shall speak of the making of the surgeon.

What is a surgeon?

The surgeon is, first and foremost, a physician, a man trained in the laws of health and disease, in the ways of preserving health and of curing disease. In person or by proxy he must lean finally on medicine. To his medical training is superadded a special and peculiar education in the treatment of certain diseases which lend themselves to cure by the help of handicraft.

Amongst other arts and crafts the surgical stands alone in the extraordinary breadth of its foundation on science. The painter is not expected to know the sciences of chemistry, botany, geometry, and optics, which intimately relate to his art; nor is the sculptor supposed to be familiar with geology because he works in clay and marble. Possibly both painter and sculptor would be the better for a scientific knowledge of their materials; but such knowledge is subsidiary and unessential. To the surgeon wide scientific knowledge is of prime importance; it is, indeed, essential.

In the meanwhile, those who arrange our curriculum go on adding to it; where is this importation of new subjects going to stop? We go on broadening the base, and adding to the foundation; might we not now give some thought to the raising of the building?

The rolling years add to our pile of knowledge, and the burden laid on us becomes heavier to bear. To some of us the burden is already too heavy; others carry it easily, and even voluntarily add new weight. How to deal with the pile so that it may best minister to our good is a problem always before us seeking solution.

Some would solve it by deliberately casting off part of the burden as being cumbersome and useless. These men say of anatomy that we have too much of it. If surgeons they say they cut where they have to cut, and if they divide a vessel they tie it. The right kidney they find in the right loin, and the left kidney in the left loin, and they cut down till they come on it. If facts must be borne in mind till examination, there are mnemonic rhymes and cabalistic formulæ to save the labour of the brain. There is, they say, too much anatomy. They say of physiology that it is unstable and uncertain, that it is burdened with an affectation of science called by its young votaries "research;" and they affirm that the young physiologist when he becomes a physician administers a dose of castor oil to his patient on very much the same principles as his grandmother followed when she gave a dose of the same drug to his father. Pathology also they despise. They tells us that this is the science of the "too late;" it helps us when the power of helping the patient is past. From the disintegrated remnants of the deadhouse they tell us we can no more work back to the beginnings of disease than from the shattered fragments of a fortification the artillerymen can work back to the powder and shot and ordnance which created the havoc.

These men are not few, and they are as honest as their opponents. The views they hold have been maintained on this very rostrum. Well, to day, from the same place I venture in all humility, but with firm belief, to proclaim the very opposite. If I am asked of surgery, "Are we to lower it so that brains may not be strained; or are we to strain our brains that surgery be raised?" then I answer unhesitatingly, "Let surgery rise if brains fail." Let the weak, or the lazy, or the impatient fall out, but do not let us lower our standard because some men cry that it is too high.

I am not, therefore, for casting anything away; but I would select, re-arrange, and raise. I would gladly see zoology and chemistry and botany turned out of the curriculum, and placed among the preliminary studies and made part of the preliminary examination. And I should like to fill their places in the curriculum with more anatomy and more physiology and more pathology. I would extend and raise our education in these branches simply and solely because I firmly believe that the fullest knowledge of them goes to provide the best practice of our art.

The foundation of our art is knowledge of the material to be worked upon, the human body. Anatomy to its uttermost details; anatomy, naked eye and minute, normal and abnormal, healthy and diseased, is the foundation of all good surgery. There is no getting over this fact. The good surgeon must be armed at all points; his armour is weakest at the most vulnerable points who who is not protected by a complete panoply of anatomical knowledge.

This anatomy the surgeon has to work out for himself. Every region and every organ of the body is indebted to the anatomical studies of the operating surgeon. It would seem as if centuries of observation by the scientific morphologist could not equal, for our purposes, a few months' work directed by the keen eye of the practical surgeon. The surgeon must indeed go on dissecting all his life long.

In physiology and pathology, again, what honest surgeon dare let himself remain ignorant of any new truth that may bear on his art? And what about bacteriology? Is it not full time that a course of this supremely important subject, as important to the physician as to the surgeon, be introduced into our curriculum? And where are we to stop? We must not stop while knowledge advances; we dare not stop anywhere. There is no hope in surgery for an easier life to its votaries; there is, on the other hand, a certainty of a harder one.

Now, in the persistent and overwhelming claims of its science, there is real danger that surgery may lose something of its art. It is an old story that a reformation in knowledge has meant ruin to art. Possibly the loss of the finest products of ancient art and literature has been more than compensated by the moral and intellectual improvements which accompanied them or caused them. This may be so; still it seems a pity that science should so often kill art. The process goes on to-day, and we help it. For example, the beautiful arts of the line engraver and of the etcher, of which some of the most exquisite specimens ever produced are to be found in old works of surgery, are being cruelly handled by the artistically crude, but scientifically interesting and exceedingly cheap, productions of the process block, which now inartistically blot the pages of our books and magazines, but greatly add to their value. There is no reason in this; science and art can well flourish together, and even help each other. Certainly it is so in surgery.

The art of the surgeon may, for purposes of comparison, be viewed from two aspects. One is allied to the art of workers in wood and iron, and may be called mechanical. The other aspect has little of the mechanical about it, and is closely allied to a fine art. The mechanical side, the art of the application of tools, is an important but comparatively simple one, and need not detain us. Easily learnt as it is, it is still worthy of being taught. It is not, perhaps, a good thing that a surgeon should for the first time handle a saw or chisel, or a drill, or a trephine on a living human bone. It would, in fact, be good for most surgeons to spend a month or two in a mechanic's shop under the severe discipline of a skilled British workman. With most of us it would certainly not be labour wasted. But I would not make tuition in the joiner's art compulsory because we use joiner's tools. In respect of technical skill in their handling, I would place the surgeon's tools on the level of the sculptor's spatula or chisel, or only a little higher. The chisel of the sculptor and the knife of the surgeon are mere incidents or accessories in the work to be compassed by the brain-compelled hands. Still, as accessories they have their importance; we ought to be familiar with our tools. But the surgeon, I repeat, is more than a mechanic; he has work to do which brings him to the level of the true artist.

The other side of our craft I would venture to compare with that which produces what are known as works of art; and this side is by far the more important. Here the work of the fingers is of small moment as compared with the work of the brain. The brain is supreme, and yet in delicacy, deftness, and general preciseness of obedience to the brain's behests, the fingers and hands have great calls made on them. In painting, sculpture, or music, mere manual dexterity rarely is deficient to him who has the artistic soul; or, if there is deficiency, practice and education will do much to remove it. So in surgery the hands rarely fail to rise to the demand the brain makes upon them if they are trained. Let us look a little more closely into the surgical fine art, for it is nothing less than a fine art.

The highest part of the surgical art is more than handicraft; it is braincraft uttered through the fingers. It is not mere manual dexterity or cunning. In fact, mere manual cunning, being a result of routine practice which begets reflex movements, is detrimental to surgical art, which demands the widest possible scope and variety of action. I should not quote the marvellous manual dexterity of the button-maker as the highest education of the hand, any more than I should quote the clever work of the oak-grainer as the highest art in painting. The surgeon's art demands breadth and variety in manual training; the hands must have all-round capacity. The finger surgeon begins at the wrong end; he ought to have been a button-maker. No training, however, comes amiss to the surgeon's fingers. By many devices and practisings he may and ought to improve their capacity; but their final and most perfect training is in the actual work.

Now the sense of touch is trained through the intellect as much as through the fingers; it is helped by comparative appeals to the other senses, but especially to sight. The blind have been found to have no special excellence in actual sense of touch; they excel in the intellectual interpretation of the sense impressions. We who can bring the sense of sight to help out the impressions to touch ought to surpass the blind in tactile power. Put it in this way. A blind man could scarcely map out in his trousers pocket the figure of Britannia on the back of a penny. But, after seeing the figure, the possessor of a trained finger will recognise by touch many of the details such as the shield and the trident and the limbs; and so he will identify the whole picture. The blind man cannot correct and verify his groping sense of touch by sight; the seeing man can. So I say that a man who can see might, if he were determined, and were loyal to the sense he seeks to train, cultivate his sense of touch to a higher pitch of delicacy than the blind man.

Now there are no limits to the demands made on the surgeon's tactile powers. Touch is to the surgeon what hearing is to the physician in diagnosis, and more in treatment. The exquisite delicacy of differentiation possessed by the ear of the physician we desire to have for the finger pulps of the surgeon. In diagnosis touch tells us what sight cannot; in operating in the dark depths of the body it goes where sight cannot, and sometimes it guides more truly than sight could. But always it is the intellect that interprets. It is as true to-day as it was twenty centuries ago that "'Tis mind that sees and mind that hears; all other things are deaf and blind."

Amongst the plastic art sculpture perhaps given us most points for comparison with the surgical. Each deals with the human body. The sculptor has to know the body externally in architecture, in bulk, and in outline: the surgeon has to know it in the same ways, internally as well as externally, and in sections vertical, transverse, and oblique as well. Each art demands from its votaries absolute fidelity to form; the ignorance that misplaces a tendon in a statue will lead to grief on an artery in an operation. There are similarities in their ways of working, too. The inferior sculptor, by adding here and subtracting there, by measuring and squeezing and scraping, may, after long working, make a tolerable likeness, but never a work of the highest art. The true artist goes straight to the stopping point and then stops. What this stopping point shall be we cannot define, but it gives us that sense of true balance between detail and mass which signifies artistic proportion. So in surgery; the surgeon-artist forms a clear conception of the work he has to do and makes straight for the ending of it. Between detail and bulk he determinedly keeps a true artistic proportion. His time is limited, and into this time he must put his best work. He wastes no time over trifles; he is very deliberate over difficulties. The most elaborate finish in both arts is visible where the technical difficulties are greatest. The clean straight strokes of a true artist are visible equally in the work of the surgeon and the sculptor.

The surgeon who is not an artist is devoid of a sense of true proportion. Where one bold cut is wanted, he will make a dainty nibbling dissection. He verifies his anatomy on the way to his work by the help of the director. He goes a little in this direction and retraces his steps; then a little in that direction and returns. His work is not towards one finished work of art, but to the making of half a dozen clever separate studies. Like the sculptor who is good at hair, and works out every one, or the painter who is good at eyes and puts

in the dots in the iris, each sacrificing the whole to the part, our inartistic surgeon lingers over his fancies, and so fails to produce finished and harmonious work. His details are not all equally balanced; some are exquisite, some are mediocre, others are bad. The whole work, the whole operation, will not be the best possible for the saving of life; it is not all round a finished work of art. Therefore it is to be condemned.

Now of this art of surgery, where and what is the teaching? Where and who are the masters who guide and correct the young artists in their work? It may be said at once, of masters there are plenty, but they do not teach. There is no real teaching of the art of surgery in our country. Here and there a favoured few, house-surgeons and assistants, are permitted to pick up what knowledge they can by looking on and by helping; but of personal guidance in the actual work on the living subject analogous to the guidance given in other arts, we in ours know nothing. We have to teach ourselves by experience alone. Think what this would mean in art training. It would mean that to paint a thousand portraits is the only way to become a first-rate portrait painter; to model a thousand figures is to become a perfect sculptor. It means in medicine that the midwife of 5000 experiences is more to be trusted than the obstetric gold medallist of London University, who can boast of only 50. And note this further. The young sculptor may with impunity make and break figures to his heart's content; the young surgeon, in learning his art, is not supposed to damage or destroy human beings.

Artists, mechanics, craftsmen of all sorts learn their work in the workshops or studios with a master to correct their faults and guide their efforts. Surgeons alone have, unassisted, to grope their way to excellence in their art. In his science the student has guidance enough in all conscience, and in his notetaking and his dressing he is sharply looked after. But he is severely left to his own devices to pick up the technics of his craft.

Is this right? That the art of surgery is teachable there can be no dispute, that it is worth teaching is still less disputable. Why, then, is it not taught?

The art can be taught in only one way, the way of teaching all the plastic arts. The young artist must, while beginning the practice of his art have a master at his elbow, a master who will criticise his methods and correct them, who will guide him in the use of his hand, his eye, and his instruments; who will in the fullest sense make him his pupil and personally lead him on, step by step, towards such excellence in the art as he himself has acquired.

If then the art of surgery is to be perfectly taught, it must be taught to the young surgeon actually operating. And here is our first difficulty. We cannot teach the art to unqualified men; students are not permitted to operate. We must begin our teaching after the student is qualified. As things are at present this is not easy. Our pupil of yesterday is our colleague of to-day; when qualified he is supposed to be our equal and therefore above our criticism. It is difficult to imagine a skilled senior in the operating theatre calling attention to the faulty methods of his young colleague; it is impossible to conceive him pushing him aside and showing him how to do it. And yet, if the living art is to be taught at all, this personal way is the only way. Why should the young surgeon more than any other young artist fear tuition in the operating theatre?

As a matter of fact I doubt if the young surgeon would fear tuition in public, if such tuition were given honestly and courteously by a man whom he could look up to as a master. There is no method of education in handiwork that can surpass fair criticism of the work before compeers. The mere pointing out of faults calls attention to details which the average onlooker would fail to see. But criticism is not all fault-finding; it calls attention to excellences as well as defects. The pointing out and correcting of faults, and the praising and holding up for imitation of any special excellence in operating might well, to the advantage of all and the discomfort of a very few, form part of the routine education of the operating theatre.

What would you or I or any surgeon amongst us not give to have a Liston or a Syme at our elbows to teach us? Who that really has his soul in his art could fail to welcome an opportunity for such tuition? And why should we not have it? There is no lack of capable teachers, and surely they could easily be induced to teach. I can conceive no finer ending to a great surgeon's career than to devote it to the education in his art of the men who are to succeed him. He has handed over his legacy of science to all mankind; he has laid aside his own knife, but his art will survive him, for, in the band of pupils whom he has trained in their work his legacy of art will be as enduring as his legacy of science.

Am I suggesting a return to something like the old apprenticeship? Well, what then? The art of surgery is no new thing. Probably as an art, pure and simple, it was more perfect in the apprenticeship days of fifty years ago than it is to-day. For then, before the days of anæsthesia, the highest art was not only a saving of life but a merciful saving of suffering. If we have lost this stimulus to perfecting ourselves in the art that pain to the patient gives, we have still the saving of life to urge us on, and that is an even greater stimulus. How a surgical artist like Robert Liston, the greatest probably the world has ever seen, trained as he was in the cruel and exacting school of pre-anæsthetic days, would have revelled in all our "otomies," "ectomies," and "ostomies" of to-day! To imagine Liston, trained in practice as he was, living amongst us now, and having before him the science we possess, is to realise my ideal of the surgeon-artist.

If we did have the old apprenticeship back amongst us it would be for surgery a something. It would be at least better than the nothing we have now. But I am not asking for the old apprenticeship; I am pleading for something higher. We speak of apprenticeship rather as to a trade; I am pleading for pupilage as if to a fine art. I am simply asking for the surgical high art what is freely and abundantly given to all other arts—personal teaching in actual work by competent masters.

Art thrives on appreciation. There is no academy to bestow gold medals on the surgical artist, no crowds gather round to admire his finished work. In the finest and purest sense the surgeon's is an art of the home, almost of the fireside; it does not appeal to the populace. The surgeon's highest reward is the moistened eye and tremulous grip of the hand which bespeak thankfulness for the breadwinner restored to the home, the mother to the children, the child to the parents. His science may be trumpeted far and wide; his art is known to his own small circle; it has little recognition beyond, and we let it die with him. The art of the surgeon has its best reward in blessings not in fame.

The Contagiousness of Consumption.

The Toronto courts have recently had the question of the contagiousness of consumption before them. A health officer demanded the dismissal from school of a child suffering from phthisis, and his action led to legal proceedings. The judge sustained the action of the health officer, deciding that the disease is contagious.

THE OPERATION FOR "ROARING" (1893).

From the recently issued proceedings of the National Veterinary Association we are enabled to glean what has been done by Captain F. Smith in his endeavour to relieve roaring by attempting to give a new nerve supply to the larynx.

On page 19 we read—

The PRESIDENT:—You will remember at the last meeting at Manchester a horse was operated on by Captain Smith. I am sure you will all be curious to know the result of that operation, and our friend Mr. Faulkner will give us some information about it.

Mr. FAULKNER:—Those of you who were present last year will know that Professor Smith very kindly performed several operations, and amongst them one upon a roarer. Since that time the horse has been kept in possession. A certain course of treatment as suggested by Professor Smith has been adopted. After the operation, for a period of eight weeks, the horse was kept quiet until the wound had healed. Subsequently to that he was exercised for half an hour daily; afterwards an hour daily. Then came a period when he was put to light work. A committee was appointed to test the horse, and, acting upon the advice of Mr. Smith, the horse was purchased. We met on the 1st June and again tested the horse. The Committee in Manchester thought it was very desirable that the horse should not be destroyed, but that a careful post-mortem examination should be made after, in the opinion of Professor Smith, a sufficient period had elapsed for the operation to have had a fair trial. We have about arrived at that period, and after the Committee made an examination on the 1st of June, I wrote to Professor Smith, and he has kindly sent a report. The Committee felt very much with Captain Smith that, having possession of the horse, we should have a post-mortem examination to ascertain whether the union of the nerves had really taken place or not. I may further read to you a suggestion offered by Captain Smith, which I think can be easily carried out, and which it is very advisable to adopt: "I have ventured to draft a report which, I think, touches on the salient features of the case. As early as possible after the meeting I will come to Manchester to dissect the horse, which I think might be carried out in conjunction with a skilled physiologist and pathologist like Sheridan Delépine. However, as I wish to test the nerve electrically, there will be no difficulty in obtaining the needful apparatus if he is associated with us. I think you will agree that the association of an independent observer with me in the post-mortem examination is desirable."

REPORT OF THE CASE.

At the Manchester meeting of the National Veterinary Association held in July 1893, an aged bay horse was operated upon by Veterinary-Captain Smith, for roaring; by a new method proposed by the operator. The animal had been a roarer for at least two years, but was selected in order that the Association might have an opportunity for a practical demonstration.

After the operation it was deemed advisable to keep the patient longer under observation than had originally been intended, both as a severe test to the operation, and also for the reason that horses were only obtainable with extreme difficulty for an operation which had not passed the experimental stage.

After the wound had healed, the animal was tested by the following gentlemen, who formed themselves into a Committee for the purpose of observing the case, viz., Messrs. Faulkner, Taylor, Locke, Hopkin, Wolstenholme, Dacre, and Meredith. The Committee reported that the horse was a roarer.

Arrangements were now made whereby the horse could be kept under prolonged observation without incurring any further cost to the Association, and this having been satisfactorily arranged, the animal has, in view of the Annual Meeting of the Association, again been tested, on 1st June, 1894, by the above Committee, with the result that no improvement, other than that which would result from an improvement in the patient's condition was observable.

In considering the causes of failure in this case, the operator is of opinion that the structural changes which have occurred in a nerve, the function of which had been destroyed for such a length of time, seriously reduce the probabilities of re-innervating it; on the other hand, it is possible that union of the nerves, viz., the spinal accessory with the left recurrent, may not have taken place.

Evidence on this point will shortly be forthcoming, and in time for publication in the proceedings, as it is proposed to destroy the horse and institute a careful post-mortem examination.

REPORT OF AUTOPSY.

At Manchester, on July 27th, 1893, an aged bay horse, said to have been a roarer for two years, was operated upon before the Association by Veterinary-Captain Smith, by dividing the left recurrent nerve and suturing it to the spinal accessory.

The after treatment was very simple, the wound healed favourably, and in a month the horse was getting daily exercise. Arrangements were subsequently made to provide the animal with a home where it could be kept under observation, and lessen further expense, but before this was carried into effect the horse was examined by the following committee of gentlemen:—Messrs. W. A. Taylor, Dacre, Hopkin, Locke, Meredith, Wolstenholme, and Faulkner.

As a result of this examination the animal was found to be a roarer. The patient was now put to work, and again examined by the same committee, on 1st June, 1894, who reported as follows:—"The physical condition of the horse had improved, as also the character of the cough and grunt, but he was still a roarer."

It was now considered advisable to destroy the animal and examine the part operated upon, and Veterinary-Captain Smith desired that in this enquiry he should have associated with him a perfectly independent and skilled observer, and the name of Professor Sheridan Delépine, of the Owens College, Manchester, naturally suggested itself.

On 23rd June, 1894, the animal was brought to Mr. Faulkner's Establishment, and several of the leading practitioners of Manchester attended to witness the post-mortem examination. A final though imperfect test of the animal was made in one of the bye streets of the city, and the operator expressed himself that some motor impulses must be passing to the larynx, or there would have been respiratory distress, considering that the animal for eleven months had been without a left recurrent nerve.

The horse was destroyed, and a rapid dissection exposed the united nerves and laid bare the larynx. A weak induction current was now passed into the left recurrent, on the larynx side of the nodule which marked the point of union, and the dilator muscles on the left side of the larynx *responded actively:* the spinal accessory some distance above the union was now exposed and stimulated, and the dilator muscles on the left side of the larynx again actively responded. These observations were repeatedly made by Professor Delépine, who took special care to isolate the portions of nerve which were stimulated from subjacent structures, and the results recorded are beyond all doubt. The muscles of the larynx were then directly stimulated, and every por-

tion responded to the current until they lost their irritability.

The muscles on the left side of the larynx were smaller and decidedly paler in colour than those on the right side.

Portions of the muscle and the united spinal accessory and left recurrent nerves were removed by Professor Delépine for microscopical examination, and he found the following changes:—The recurrent nerve between the point of union and the larynx consisted of small bundles of small medullated nerve fibres, surrounded by an amount of Epi and Peri neureum larger than normal. The place occupied by the old funiculi was quite distinct, but the nerve fibres occupied only a portion of the spaces thus indicated. The nerve fibres were all of smaller diameter than normal, and most of them had a very thin myelin sheath, which however, stained well with osmic acid. Dr. Delépine, from this and from the results of his other observations, concluded that partial regeneration had certainly taken place, and that regeneration was progressing at the time of death.

Result.—It has been proved that one motor nerve is capable of doing the work of another. The larynx of the above horse must have been supplied with motor power through the spinal accessory, and there is a certain amount of evidence to show that not only union and regeneration of the nerves took place, but that co-ordination of the muscles occurred, viz., the impulses transmitted at the right moment.

To establish this latter point is now the *crux* of the case. We know that union and regeneration of the nerves can be effected, and motor impulses be supplied to a part by a nerve never intended by nature for the purpose; but it has yet to be established beyond all shadow of doubt that the impulses can be sent at the right moment, and that cells in the medulla can be educated to *perform accurately* new duties imposed upon them by Art.

It is to be hoped that, if assistance be forthcoming, this question will be definitely settled in the course of a year or two.

THE SPREAD OF SCARLET FEVER BY MEANS OF MILK.

Mr. Shirlev Murphy has recently presented to the Public Health Committee of the London County Council a very interesting and closely reasoned report on a sudden outbreak of scarlet fever which occurred in the spring of this year at Blackheath. The outbreak, which was more particularly confined to the subdistricts of Greenwich and Lee, commenced about March 19th, and after continuing for four days rapidly declined. At an early date suspicion fell upon a certain milk supply as being the means of disseminating the disease, and Mr. Shirley Murphy was soon able to establish the fact that the milk from a certain farm was responsible for the outbreak. When, however, inquiry was made as to the means by which the milk obtained the property of infectivity, numerous difficulties—in the large part insurmountable—were encountered. It was found that there had been cases of scarlet fever among those who were brought into contact with the milk and the cows, but Mr. Shirley Murphy, on making a careful analysis of the dates of attack, demonstrated that those cases concerning which there could have been reasonable suspicion were in all probability the victims and not the cause of the outbreak. There are several features in connection with this outbreak that gives it considerable interest. On Mr. Shirley Murphy's first visit to the farm he discovered that one of a pair of newly-calved cows, which had on March 17th arrived from Eltham, had lost patches of hair and presented on the teats numerous excoriations and scabs; and that another cow in the same shed was also affected with abrasions and scabs on the teats. On a subsequent visit two other cows were found to be affected with ulcerated teats, and it was ascertained that three out of the four cows referred to were milked by the same milker—*i.e.*, the one who milked the Eltham cows. Unfortunately it was found impossible, owing in large part to contradictory evidence, to ascertain the exact distribution either as regards time or customers of the milk from the Eltham cows. but it was an interesting point to note that the milk of certain cows which supplied the "nursery milk" failed to carry infection to those who drank it. Briefly summed up, it may be said that the Blackheath outbreak was one which was certainly spread by infected milk, that there was no evidence of the milk having received its infective properties directly from human agencies, and, lastly, that one of two cows which arrived on the farm two days before the outbreak, presented loss of air in patches and signs of an eruptive disease on the teats. Here the question, from lack of reliable evidence, must be left, but there are certainly some indications of the possibility of the outbreak having been caused by a disease of the cows. On reading the Blackheath report two points are naturally suggested: in the first place the necessity for some definite regulations in regard to cows affected with udder disease; and, in the second, the desirability of more method being exercised in dairy farms in reference to the distribution of milk, in order that it may be possible in outbreaks of this kind to trace back the milk to certain cows or groups of cows. The economical aspect of some such provision as this must be obvious, inasmuch as where the evidence pointed conclusively to disease of the cow, and not to human agency, as the cause of contamination, it might suffice to withdraw the affected cow or cows from contributing milk instead of perhaps irretrievably ruining the farmer by stopping the sale of all his milk, and by this action drawing public attention to the outbreak.—*The Lancet.*

BOARD OF AGRICULTURE BUNGLING IN EDINBURGH.

The following is from a leading article in *The Evening Dispatch*:—

In the outskirts of the west end of Edinburgh there are a great number of large piggeries, many of which contain from 200 to 300 pigs apiece. These herds are fed very cheaply on distillery "dreg" and the refuse from the numerous hotels in the city, and, on account of the high prices realised of recent years for pork products, this branch of industry in the western outskirts of the city has proved highly profitable. The piggeries, however, are for the most part very cheaply got up, and very dilapidated. Many of them are in groups, and they are mostly all badly infested with rats; so that whenever an outbreak of swine fever occurs in any one of them, the virus of this highly contagious disease is almost certain to be carried to the other piggeries in the group. Some three years ago there was a very bad outbreak of swine fever among these piggeries, and the Midlothian County Council spent over £1000 in three months in stamping out the outbreak. Another outbreak of the disease has occurred in one of these piggeries recently, and the way which it has been dealt with by the Board of Agriculture is well fitted to convey a good idea of the cause of Mr. Gardner's non-success in the stamping out of swine fever. This outbreak was reported to the Board of Agriculture by Mr. Cunningham, V.S., Slateford, on the 11th inst. But instead of the infected stock being slaughtered out at once, so as to prevent as far as possi-

ble the disease from spreading among the neighbouring herds, the Board of Agriculture have pursued a policy of "masterly inactivity," and at the present moment there are fifty animals in that piggery all labouring under the worst form of the disease, while the carcases of some that have already died of the disease are lying about for the inspection of the Board of Agriculture officials, when they find it convenient to arrive at the scene of the outbreak! And not only are those affected animals being allowed to linger on in the agonies of this loathsome disease, but all this is done at the imminent risk of the disease spreading like a pestilence among the numerous herds in the district; whereas if the outbreak had been promptly dealt with, it might have been stamped out at a minimum of cost. Such an exhibition of gross and wretched mismanagement would hardly be credited were it not that the dead and dying animals may be seen by anyone who cares to go out to Gorgie to see them. Surely it is time that the County Council took action in the matter.

SWINE FEVER INCIDENTS IN CORNWALL.

Cornwall County Council at their last meeting having called attention of the Board of Agriculture to the manner in which outbreaks of swine fever are dealt with by the inspectors of the Board, more particularly as regards the cost incurred in respect of compensation for slaughtered swine, burying carcases, and disinfecting premises, which shewed, the Council considered, that the course adopted was not conducive to stamping out the disease, and that it could be more efficiently and economically carried out by the local authority. Major Tennant, of the Beard of Agriculture, accompanied by Inspector Carter, attended the Executive Committee of Cornwall at Bodmin on Thursday, Aug. 23rd, to give information. Mr. J. S. Tucker presided.

The Chairman explained that the resolution of the Council was not passed in a spirit of antagonism to the Board of Agriculture, but merely to point out irregularities. The first was a case of swine being brought upon premises before those premises was declared free. It occurred at Carnon Bridge, where six diseased swine were killed on January 18th, and on February 8th. Three others were brought on the spot, but the premises were not declared free until March 7th. In his opinion that roused mistrust in the minds of the public. At Mr. Rapson's, Liskeard, swine fever was reported on December 16th, and on the 19th it was declared an infected place. At the same time there were pigs in an adjoining field, but no restriction as to their movement. Seeing the infected place belonged to a butcher, where dogs were continually carrying across fields refuse from the slaughter-house, it appeared to him (the chairman) the adjoining premises should be declared infected. As to extravagant expenditure, a case occurred at Jolly's Bottom, near Truro, where swine fever existed. An inspector, a valuer, an assistant, and a butcher visited the premises to value and slaughter one pig estimated as being worth 25s. The inspector told the owner to bury the pig, and gave 3s. 6d. for expenses, saying they should leave the matter entirely to her. That was not an economical or efficient procedure. At Wilton, St. Germans, a pig belonging to an agricultural labourer was suspected of disease, but before the arrival of the police the pig was slaughtered and dressed for market, and found to be red and unfit for food. The usual portion was then sent to the Board of Agriculture, who ordered the remainder of carcase to be buried. In due course the disease was declared to be swine fever, and the Board's inspector ordered the slaughter and sale of a pig on adjoining premises. This was considered an extravagant method of disinfecting. A tradesman resident five miles distant from the infected place was employed to estimate the cost of disinfecting. He was three times to carry out the operation, and said he was ordered only to disinfect as high as the pig stood, but if they would clean the cobwebs for him he would make a thorough job of it. Mr. Tucker alluded to the case of Smith heard at St. Austell Petty Sessions, and also to a case at Tregoney where a pig died of swine fever. The inspector purchased two pigs remaining, and had them slaughtered by a local blacksmith, who pronounced them fit food, and they were sold to a Truro butcher. Was it wise to entrust such a matter to a blacksmith? He believed he had given sufficient cases which prompted the Council to pass the resolution.

Mr. Tresawna asked who appointed the valuer, because there was a general opinion that it was an advantage to have swine fever. He had heard of cases of 25 per cent. above the actual value being paid.

Mr. Key pointed out that at St. Columb a veterinary surgeon was brought from Truro, a distance of 16 miles, when there was one resident with three miles. It was thought the reason was because Mr. Harvey, of St. Columb, had expressed an opinion contrary to that held by the officers.

Major Tennant, in the course of his reply, said the case at Carnon Bridge had been thoroughly thrashed out by the Board of Agriculture, who considered it would be a great hardship to shut up premises entirely, and to allow owners to import fresh swine while the premises were under the restrictions of the Board. As to the case at Liskeard in December, he (Major Tennant) thought the very fact of its being mentioned indicated that there had been some misunderstanding between the Board of Agriculture and the local authorities as to their respective duties. The Inspector of the Board of Agriculture is not supposed to arrive on the spot until the slaughter is contemplated, but the powers of restricting removal are in the hands of the local authority, and the Board of Agriculture would not wish to interfere with these powers as they consider the local authorities have greater opportunities of enforcing them. As regards the charge of extravagance in valuation, the views of the Board are that where there is a considerable number of pigs killed, valuers should be employed, and he believed the valuers formerly appointed by the local authority had been so employed by the Board of Agriculture. Sometimes they found the best man had not been employed, because they are under considerable local pressure. The Board are, however, constantly charged with treating owners not extravagantly, but harshly. He did not suggest that mistakes had not been made, but if an owner had obtained in one case more than he deserved that owner had not been able to do so again. Wherever disease had been spread by carelessness that guilty person had not received any benefits. If the local authority would submit a revised list of valuers, the Board would endeavour to meet their views. As to the general expenditure, it is difficult to compare with the expenditure of previous authorities, but the true test was success. No doubt local authorities kept down the expenses, but they could not disregard the fact, after having had the powers for ten years, that when the Board took the question over, eight months ago, they were no nearer stamping out swine fever than they were ten years ago. Respecting the case of Smith, he considered that matters of detail like that should be communicated at the time to the Board, who would make inquiries and inform the local authorities of result. As to the carcase sent to Truro, the Board's directions are that the slaughterer shall in the first instance be asked whether the carcase is diseased or not. In this case the slaughterer was a blacksmith. There is another safeguard. Before the cascase is sent to a salesman it must be submitted to a sanitary inspec-

tor, who certifies as to its fitness for food. He did not recollect any, if there were any, particulars of the non-employment of Mr. Harvey, but he was certain it was not for the reason assigned by Mr. Key. He would, however, make inquiries into the circumstances. The question of granting licences rested with the local authority, and he suggested that movement should not be permitted unless for very special reasons.

Some discussion ensued, during which Mr. Tucker said the veterinary surgeons felt aggrieved.—Major Tennant said it was entirely unnecessary, as they still required to make reports. The Treasury provided the money and they ought to decide where to spend it. There have been great mistakes in the past, and the professional officers of the Board assure them swine fever is a very difficult disease to diagnose, and having regard to that the Treasury were of opinion they should be satisfied they were not fighting a bogey. A similar course was adopted respecting pneumonia.—Colonel Gilbert explained that the police carried out all their duties with promptitude, but had to await orders from the Board of Agriculture. —*Western Morning News.*

Technical Instruction to Shoeing-Smiths.

For the past three weeks Mr. T. H. Fathers, the instructor appointed by the Berks County Council has been giving a series of lessons with the travelling shoeing forge to the local shoeing-smiths in the Kintbury district. Our correspondent (Mr. Garratt Jones) anxious to know if these lessons are of practical worth, has interviewed the smiths on the completion of the lessons with the following results.

No. 1. "The lectures have been of great benefit and very profitable."

No. 2. "The instructions have enlightened blacksmiths in making shoes in different ways and for different classes of feet."

No. 3. "Quite believe in the instructions on shoeing and have obtained much knowledge since Mr. Fathers opened his shoeing forge."

No. 4. "I'm thankful for the lessons which were most practical and I learnt a great deal."

No. 5. "I derived great benefit from the lessons."

No. 6. "He taught me a good many points in making a shoe."

The smiths unanimously passed the following resolution "That a cordial vote of thanks be given to Mr. Fathers' for his instructive lessons on shoeing and making."—*The Newbury Weekly Herald.*

ARMY VETERINARY DEPARTMENT.

Vet-Lieuts. C. B. Freeman, W. A. McDougal and F. S. H. Baldrey embarked on 31st August for a tour of service in India.

Vet.-Capt. W. A. Crow has been brought on the Home Establishment and posted to Chatham for duty.

Vet.-Lieut. J. H. Jackson has been brought on the Home Establishment, and posted to 10th Hussars at Ballincolig for duty.

Vet.-Capt. W. B. Spooner has been transferred from Ipswich to Sheffield.

Vet.-Lieut.-Col. G. A. Oliver has been appointed District Veterinary Officer at Aldershot, vice Vet.-Lieu.-Col. H. Thomson who embarks for India to take up the duties of Inspecting Veterinary Officer, Eastern Circle, Bengal.

Vet.-Major J. Hammond is under orders to embark for Egypt to take up the duties of Senior Veterinary Officer in that country.

Vet.-Capt. L. J. Blenkinsop has been transferred from 10th Hussars, Ballincollig, to the Royal Horse Infirmary, at Woolwich.

Vet.-Lieuts. W. F. Shore and G. K. Walker, joined at Aldershot for duty, on appointment, on the 13th instant.

Extracts from *London Gazette*, dated 28th August,

The undermentioned Veterinary-Lieutenants to be Veterinary-Captains. Dated 27th August, 1894 :—Tom Marriott, F.R.C.V.S., H. T. Pease, G. H. Evans, E. R. C. Butler, F.R.C.V.S.

Volunteer Corps (6th Lancashire Artillery).—J. K. Pilkington, Gent., to be Veterinary-Lieutenant. Dated 29th August, 1894.

The Late Vet-Lieut. T. J. Stanley Clarke, A.V.D.

The Service has lost one of the most promising veterinary officers in India by the death of this officer, particulars regarding which have just been brought over by one who was present at the time. The accident, which resulted in his death, we noticed in our issue of the 19th instant. On the 17th ultimo Veterinary-Lieutenant Stanley Clarke returned to Myingyan from Thayetmyo, where he was employed temporarily in tending Commissariat sheep among which an epidemic of small-pox had appeared and carried off large numbers. On the 18th he took part in a game of pole at Myingyan, a sport he was particularly fond of. Towards the end of the game a back handed drive from one of the players, accidentally struck Mr. Clarke on the right eye, smashing the ball of it. He was at once attended to by Surgeon-Captain D. H. McD Graves, 21st Madras Pioneers, who had him removed to his (Dr. Graves') bungalow, where every possible care was taken of the sick officer. Mr. Stanley Clarke made satisfactory progress until Wednesday, the 27th idem, when it became necessary to remove the eye, an operation which was immediately followed by relief and cheerfulness. On the following Saturday, however, inflammation attacked the severed nerves, and although every possible means were adopted to arrest this, the inflammation appears to have reached the brain, causing death at 2 p.m. next day (1st July). The funeral of the deceased took place the following morning. The coffin was carried to the hearse by a party of the 21st Madras Pioneers. The procession was headed by a firing party of the 3rd Regiment Palamcotta Light Infantry, under the command of Lieutenant O'Reilly. The band of the regiment also attended. On the coffin, which bore of course the deceased officer's sword and helmet, was a lovely wreath of flowers, worked by Mrs. Witney (wife of Mr. Witney of the Commissariat Department). Six officers acted as pall bearers. The remains of the deceased officer were followed to the grave by all the officers, civil and military, and all the warrant and non-commissioned officers in the garrison. The funeral service was read by the Rev. J. P. Dyer, M.A., (formerly chaplain at Port Blain) who had a few days previously come to the station.

Veterinary-Lieutenant Thomas Jordaine Stanley Clarke entered the Army Veterinary Department on the 6th January, 1892. He arrived in India on the 29th March, 1892. From the 12th April, 1892, up to 29th January, 1894, he was attached to the Army Veterinary Station Hospital, Bangalore, when he was transferred to Burma for duty.—*Bangalore Spectator*

Vet.-Capt. F. Raymond is to proceed to India for a tour of service, and will probably be required to embark at Southampton on the 27th September.

Vet.-Lieut.-Col. Alfred E. Queripel is seconded whilst holding the appointment of Inspector-General of the Civil Veterinary Department in India : 28th May. Vet.-Maj. George A. A. Oliver to be Vet.-Lieut.-Col., vice A. E. Queripel : 28th May. Edward John Barry, Gent., to be Vet.-Lieut. in succession to Vet.-Lieut.-Col., A. E. Queripel : 22nd Aug.—*Broad Arrow.*

Many of our readers are not in the way of seeing the proceedings of the Royal Society. In the last number appeared an article by Veterinary Captain F. Smith, A.V.D. on the "Refractive Character of the Eyes of a Horse." Veterinary Captain Smith's investigations show that the majority of horses are short-sighted, though not to the same degree as is met with in man, whilst 74 per cent. of the horses examined suffered from a moderate degree of astigmatism.

On Stable Management.

In the August "Proceedings" of the Royal Artillery Institution will be found a good sensible paper on "Stable Management," by Veterinary Lieutenant-Colonel W. B. Walters, C.B. Nearly everything that the writer says ought to be familiar to all horse-masters, but he is right in dealing with elementary truths in addressing a body of officers who are so much occupied in higher scientific pursuits that they are in danger of overlooking such a matter as stable management. Another good reason for dwelling on what may seem to be self-evident propositions is that their full force has yet to be admitted by our military authorities. When an officer of such weight and experience as Veterinary Lieutenant-Colonel Walters expresses his opinions on watering, clipping, and bedding down, doing so, moreover, in such clear and well-chosen language, it may be hoped that his words will be heeded and produce some effect. All who have paid any attention to the subject are aware that, for the watering of horses, by far the best plan is to leave an unlimited supply always within their reach. This may be done by various methods, but if it is done at all the horses will never drink too much at a time, and will never suffer the pangs of thirst. On this point two quotations may suffice. The first, from the paper, is as follows: Insufficiency of water is a potent factor in the production of many ailments." The next is from a speech of Lieutenant-Colonel Pipon, R.H.A. He said: "I do not think there can be any more important subject. If some arrangement could be made in the stable, such as I had at Aldershot, of a water trough running through the middle of the large stables there, and also half beer-barrels full, it would be found to be a great advantage in that respect. I never saw anything answer better. Until we have some such system I do not think the watering in the stable in winter will be as satisfactory as officers could wish." With regard to changing quarters to a place where the water is hard, after the horses have been used to soft water, it is essential that officers should be thoroughly posted up in this matter, and in the precautions which should be taken to prevent illness. Another innovation not yet fully sanctioned is clipping, but wherever it has been permitted the best results have followed. As to bedding down at midday, it is objected to by some officers on the score of waste, but this is what Colonel Walters says: Many horses will lie down during the afternoon, if they are permitted to do so, and this short rest is a great boon to them, especially after a hard field day. I know from experience that if the litter is well managed, the allowance is sufficient for the purpose." We have briefly touched on only three points in this paper on stable management, but they certainly are very important ones, and have a considerable bearing on the comfort and fitness of Army horses. They are items of management on which the most intelligent both of military and civilian horsemen have made up their minds, and it could not be considered premature if they were now recognised in the Regulations.

Indian Civil Veterinary Department.

Under the revised rules of the Indian Civil Veterinary Department, 18 months' instead of three years' Army service is laid down as a necessary qualification for civil employ. Eighteen months is fixed as the probationary period in the Department itself, during which the probationer has to pass language tests. The Inspector-General after three years' tenure of office will be entitled to a pension of £500 per annum. The Government will also have to frame measures for ensuring pensions to the widows and orphans of civil veterinary officers.

Army and Navy Gazette.

CORRESPONDENCE.

MR. DOLLAR AND THE FARRIERS' COMPANY.

[We are requested to publish the following, which is the letter referred to in report of Council meeting at p 52 of our current volume, and regret that it should not have appeared earlier.]

To the President and Council of the Royal College of Veterinary Surgeons.

Gentlemen.—At the last Meeting of Council, I was elected a member of the Registration Committee of the Worshipful Company of Farriers. As shown by the motion of which I then gave notice, I was oppposed to the course adopted by that Committee, and was in fact only prevented from withdrawing my name by the advice of a member of Council for whom I have the greatest respect. Since that time, however, I have considered the whole subject with great care and am regretfully compelled to take this, the very earliest opportunity, of retiring from a position which might suggest my concurrence in the course adopted by the Registration Committee. In doing so I am actuated firstly by a strong sense of the grave irregularities which have distinguished the working of the Farriers' Registration Scheme from its inception, and secondly by the resolution come to by the Special General Meeting of the Royal College of Veterinary Surgeons held on August 4th last. That resolution called on the Council of the Royal College of Veterinary Surgeons to sever its connection with the Registration Committee, and I believe it has the support of the profession. Holding that belief the only course left me is to respectfully notify to this Council my resignation from the post of delegate to the Registration Committee and my withdrawal of the motion relating to that Committee standing in my name.

I have embodied my resignation in this form to prevent any accidental circumstance interfering with its early deliverance.—I am gentlemen,

Your obedient servant,

Jno. A. W. Dollar.

PARASITIC MANGE.

Sir,

In reference to the Parasitic Mange case in Cornwall, reported on the 18th inst., would some of the readers of *The Veterinary Record* kindly inform us if Parasitic Mange is included under the Contagious Diseases Act.

So many changes are made in the County Council Orders that one does not know what is right and what is wrong, and most veterinary surgeons who are not Inspectors for the County Council hear of any new order that is out only when their attention is called to it through some Police case reported in the public press.

I think a copy of the regulations of the Veterinary Department of the County Council ought to be sent to each veterinary surgeon, for we as a body are expected to know—though the C.C. don't tell us—of any alterations that they make.

Yours truly,

Cyclops.

Communications, Books, and Papers received:—Sir Joseph Lister, Capt. F. Smith, Messrs. J. Brown, J. Gofton, H. J. Dawes, F. T. Harvey, J. Frazer, W. T. D. Broad, W. J. Mulvey, F. C. Mahon, F. Hobday, W. Carghill Patrick, J. B. Wolstenholme, W. Mole. *Medical Review*, (S. Louis), *Agricultural Magazine* (Colombo), *The Western Morning News*, *The Evening Dispatch* (Edin.) *The Scottish Farmer*, *The Baltimore Sun*.